WHAT IS CLAIMED IS:

1. A genetic research system comprising:
   a) one or more genotype data structures to store genotype data obtained from individuals belonging to a plurality of sampling units;
   b) one or more phenotype data structures to store phenotype data obtained from individuals belonging to a plurality of sampling units;
   c) a project data structure to store information about genetic research projects that include one or more of the sampling units;
   d) a species data structure to store information about biological species included in the genetic research projects;
   e) a chromosome data structure to store information about the chromosomes of the biological species; and
   f) a front-end gateway that provides access to information derived from the genotype and phenotype data.

2. The system of claim 1, further comprising:
   a) a role data structure to store information about roles that users may be assigned in the projects;
   b) a privilege data structure to store information about the operations that the users can perform using the system; and
   c) a user data structure to store information about the users.

3. The system of claim 1, further comprising a sampling unit data structure to store information about the sampling units.

4. The system of claim 1, further comprising an individual data structure to store information about the individuals.

5. The system of claim 4, further comprising a sample data structure to store information about samples obtained from the individuals.

6. The system of claim 4, further comprising a grouping data structure to store information about genetically relevant groupings to which the individuals can belong.

7. The system of claim 6, further comprising a group data structure to store information about genetically relevant groups within the groupings.

8. The system of claim 1, further comprising:
   a) a variable data structure to store information about phenotypic traits measured or observed for individuals in the sampling groups; and
   b) a variable set data structure to store information about the variables that are to be used when generating data files.

9. The system of claim 1, further comprising:
   a) a marker data structure to store information about genetic markers examined for individuals in the sampling groups;
   b) an allele data structure to store information about alleles of one or more of the genetic markers;
   c) a marker set data structure to store information about the genetic markers that are to used when generating data files.

10. The system of claim 9 further comprising a position data structure to store information about the genetic position of the markers.

11. A genetic research system comprising:
   a) one or more genotype data structures to store genotype data obtained from individuals belonging to a plurality of sampling units;
   b) one or more phenotype data structures to store phenotype data obtained from individuals belonging to a plurality of sampling units;
   c) one or more genotype proxy data structures that permit the collective analysis of at least some of the genotype data while maintaining the genotype data pertaining to individual sampling units in the genotype data structures;

d) one or more phenotype proxy data structures that permit the collective analysis of at least some of the phenotype data while maintaining the phenotype data pertaining to individual sampling units in the phenotype data structures; and

e) a front-end gateway that provides access to information derived from the genotype and phenotype data.

12. The system of claim 11, further comprising a project data structure to store information about genetic research projects that include one or more of the sampling units.

13. The system of claim 12, further comprising:

a) a role data structure to store information about roles that users may be assigned in the projects;

b) a privilege data structure to store information about the operations that the users can perform using the system; and

c) a user data structure to store information about the users.

14. The system of claim 12, further comprising a sampling unit data structure to store information about the sampling units.

15. The system of claim 12, further comprising an individual data structure to store information about the individuals.

16. The system of claim 15, further comprising a sample data structure to store information about samples obtained from the individuals.

17. The system of claim 15, further comprising a grouping data structure to store information about genetically relevant groupings to which the individuals can belong.

18. The system of claim 17, further comprising a group data structure to store information about genetically relevant groups within the groupings.

19. The system of claim 11, further comprising:
    a) a variable data structure to store information about the phenotypic traits measured or observed for individuals in the sampling groups; and
    b) a variable set data structure to store information about the variables that are to be used when generating data files.

20. The system of claim 19, wherein the phenotype proxy data structures comprise:
    a) a unified variable data structure to store information about unified variables that refer to and associate variables pertaining to different sampling groups; and
    b) a unified variable set data structure to store information about the unified variables that are to be used when generating data files.

21. The system of claim 11, further comprising:
    a) a marker data structure to store information about genetic markers examined for individuals in the sampling groups;
    b) an allele data structure to store information about alleles of one or more of the genetic markers;
    c) a marker set data structure to store information about the genetic markers that are to used when generating data files.

22. The system of claim 21, further comprising a position data structure to store information about the genetic position of the markers.

23. The system of claim 21, wherein the genotype proxy data structures comprises:
    a) a unified marker data structure to store information about unified markers that refer to and associate markers pertaining to different sampling groups; and
    b) a unified allele data structure to store information about unified alleles that refer to and associate alleles pertaining to different sampling groups; and
    c) a unified marker set data structure to store information about the unified markers that are to be used when generating data files.

24. The system of claim 23, further comprising a unified position data structure to store information about unified positions that refer to and associate positions pertaining to different sampling groups.

25. A method for providing access to a genetic research system, comprising:

a) receiving a request from a user to access a genotype data structure within the system, wherein the genotype data structure includes nucleic acid sequence data and a level attribute;

b) querying a project data object within the system to determine which entries within the genetic research objects the user can access;

c) querying a role data structure and a privileges data structure within the system to determine a set of operations that the user is allowed to perform; and

d) providing access to the system based on the results of the queries.

26. A method for providing genetic research information to a user, comprising:

a) providing the user access to a genetic research system including one or more genotype data structures to store genotype data obtained from individuals belonging to a plurality of sampling units, and one or more phenotype data structures to store phenotype data obtained from individuals belonging to a plurality of sampling units;

b) using one or more genotype proxy data structures to associate genotype data for individuals in different sampling units while maintaining genotype data for individual sampling units in the genotype data structures;

c) using one or more phenotype proxy data structures to associate phenotype data for individuals in different sampling units while maintaining phenotype data for individual sampling units in the phenotype data structures; and

d) providing the user with information derived from the associated phenotype data and the associated genotype data.